

CLAIMS

1. A server-client network environment, comprising:

5 a not-as-yet operational client site comprising a client-hardware platform not loaded with any client-software application program;

a fully operational server site comprising a server-hardware platform, a server-software application program, and a client-software application program; and

10 a client-control utility program installed on the not-as-yet operational client site and providing for an automated download of said client-software application program from the server site.

2. The server-client network environment of claim 1, wherein:

15 the client-control utility program provides for broadcasts of its identity on a computer network that interconnects the client site and the server site.

3. The server-client network environment of claim 1, wherein:

20 the server is responsive to broadcasts from the client-control utility program over a computer network that interconnects the client site and the server site.

4. The server-client network environment of claim 1, wherein:

25 the client-control utility program provides for client initialization after downloading said client-software application program.

5. The server-client network environment of claim 1, further comprising a printing system including:

30 a plurality of raster-image processors (RIP's) for converting page description language commands into a bitmap for a printer engine;

a profiler for receiving multiple-page print requests from a computer application program and operating system, and providing a complexity estimate of the command language stream for each print-page and a
35 dependency list of any inter-print-page resources; and

a scheduler connected to receive said complexity estimates and said dependency list, and able to dispatch individual print-page raster-image

processor jobs to particular RIP's depending on said complexity estimates and said dependency list.

6. The server-client network environment and printing system of claim 5,
5 further comprising:

a page manager connected to receive finished raster-image processing jobs from each of the RIP's in whatever order they are completed, and then able to output such in an original page order.

10 7. The server-client network environment and printing system of claim 5, wherein:

the scheduler is such that said complexity estimates and said dependency list are used to minimize idle times for the RIP's.

15 8. The server-client network environment and printing system of claim 5, wherein:

the profiler is such that it includes an application program interface (API) that is used to provide detailed profile information to the scheduler in a print command stream.

20 9. The server-client network environment and printing system of claim 5, wherein:

the profiler is connected to a printer driver through an application program interface (API), and thereby provides a profile information to the
25 scheduler in a print command stream.

10. A method of printing multi-page documents with multiple raster-image processors (RIP's), the method comprising:

30 deploying a not-as-yet operational client site comprising a client-hardware platform not loaded with any client-software application program;

placing on-line a fully operational server site comprising a server-hardware platform, a server-software application program, and a client-software application program;

35 installing a client-control utility program on the not-as-yet operational client site and providing for an automated download of said client-software application program from the server site;

profiling the command stream complexities and resource dependencies of a series of pages to be printed;

associating a profile of the command stream complexities and resource dependencies of a series of pages to be printed with a printing
5 command stream; and

dispatching individual raster-image processor jobs for each of said pages to be printed to particular RIP's according to said profile.

11. The method of claim 10, wherein:

10 the step of dispatching is such that said complexity estimates and said dependency list are used to minimize idle times for the RIP's.

12. The method of claim 10, further comprising:

collecting the individual outputs of each raster-image processor and
15 recombining them back into a page-ordered sequence for a print engine.